

Remarks

Reconsideration and allowance of the subject patent application are respectfully requested.

Claims 5 and 12 are allowed.

Claims 1-4, 6-11, and 13-24 were rejected under 35 U.S.C. Section 102(b) as allegedly being anticipated by Kondo (U.S. Patent No. 5,576,772). Applicant respectfully traverses this rejection.

Kondo discloses a method and apparatus for detecting a motion vector between a block in an image and a corresponding block in another image. In Kondo, motion vectors are obtained respectively in a first hierarchical stage, a second hierarchical stage and a third hierarchical stage (*see* Figures 9A-9C). The motion vector of the third hierarchical stage is outputted from determining circuit 18 (*see* col. 12, lines 43-51 and Figure 11B); the motion vector of the second hierarchical stage is outputted from determining circuit 19 (*see* col. 13, lines 4-10 and Figure 11B); and the motion vector of the first hierarchical stage is outputted from determining circuit 20 (*see* col. 13, lines 21-22 and Figure 11B).

The motion vector of the third hierarchical stage is doubled by a multiplier 22 and added to the motion vector of the second hierarchical stage by an adder 23. This summed motion vector is doubled by a multiplier 25 and added to the motion vector of the first hierarchical stage by an adder 26. Finally, the resultant motion vector is outputted from the terminal 27 (*see* Figure 11B). Thus, the motion vectors of all the hierarchical stages are used to obtain the resultant motion vector.

Kondo does not disclose a selecting device for selecting one of the movement vectors generated by a plurality of generating devices as called for in independent claims 1 and 7; or a selecting device for selecting one of the movement vectors generated by two or more vector generators as called for in independent claim 15; or a selecting process of selecting one of the movement vectors generated by a plurality of generating processes as called for in independent claims 8 and 14; or a selecting process for selecting one the movement vectors generated by two or more vector generating processes as called for in independent claim 20. As noted above, in Kondo, the motion vectors of all the hierarchical stages are combined to obtain a resultant motion vector -- there is no device or process for selecting one of a plurality of movement

vectors. For at least these reasons, Kondo cannot possibly anticipate claims 1, 7, 8, 14, 15, 20 and the claims that depend therefrom.

The final office action alleges that elements 12a-12e are considered to be the plural generating devices where each generating device generates a movement or motion vector. This is in complete contradistinction to the express disclosure of Kondo and there is no basis or support in Kondo for this allegation. Elements 12a-12e are differential value detection circuits for detecting differential values between the inputs thereto. *See, e.g.*, col. 12, ll. 16-18 ("Differential value detecting circuit 12a obtains the differential value between the output signals of the constant component extracting circuits 7a and 7b..."). Kondo describes determining circuits 18-20 -- not circuits 12a-12e -- as producing motion vectors. *See, e.g.*, col. 12, ll. 47-51 ("The determining circuit 18 also produces the third hierarchical stage motion vector between the base block of the present frame and the best matching block in the third hierarchical search range of the reference frame."). *See also* col. 13, ll. 4-5 and col. 13, ll. 21-22. It is impermissible to ascribe the function of generating movement vectors to certain elements of Kondo where the disclosure of Kondo expressly discloses that other elements perform this function.

The office action further alleges that circuits 18-20 are a selecting device for selecting movement vectors generated by the circuits 12a-12e. Here again, there is no basis or support in Kondo for this allegation. As noted above, determining circuits 18-20 produce motion vectors, and do not select from among previously generated motion vectors, particularly motion vectors that generated by generating devices (or processes) respectively using search ranges different from each other and search accuracies different from each other.

Finally, Kondo does not "select" the final, best resultant motion vector at element 27 as implied in the office action. Node 27 outputs the result of combining the three outputs of the elements 18-20. There is no selecting function ascribed or implied in Kondo in connection with this output.

In addition, Kondo fails to disclose numerous features specified in the rejected dependent claims and Applicant traverses any assertions in the office action to the contrary. For example, inasmuch as the only movement vectors disclosed by Kondo are output from circuits 18, 19 and 20, Kondo cannot possibly disclose, among other things, the selecting and comparing features called for in certain dependent claims. By way of illustration, claim 16 calls for comparing the search range of one vector generator and the length of the movement vector generated by another


vector generator. The office action references Figure 11B and elements 12a-12e and 18-20 as allegedly disclosing this feature. However, none of these elements involve comparing the length of one movement vector and the search range of a vector generator for generating a different movement vector. Accordingly, this claim cannot possibly be anticipated by Kondo.

New claims 25-34 are added. The subject matter of these new claims is fully supported by the original disclosure and no new matter is added. These claims are believed to be allowable for reasons similar to those advanced above. Specifically, there is no element in Kondo that selects one of a plurality of movement vectors generated by movement vector generators, each of which uses different search criteria, and outputs only that selected movement vector to a movement compensating process. The determining circuits 18, 19, 20 of Kondo each generates a respective movement vector and none of these individual circuits in any way "selects" from among a plurality of movement vectors generated by different vector generators. In addition, even if determining circuits 18, 19, 20 are erroneously viewed in the aggregate as constituting some sort of "selecting device," this selecting device would not output only one movement vector. Indeed, Kondo clearly describes that the respective outputs of determining circuits 18, 19, 20 are in fact combined by the various circuits 21, 22, 23, 24, 25 and 26 to generate a motion vector that is output at terminal 27. There is no disclosure or suggestion in Kondo that only one of the outputs of determining circuits 18, 19, 20 be selected and that this selected output be provided to a movement compensating process.

For at least these reasons, all pending claims are believed to be allowable and early notification to that effect is respectfully requested.

Respectfully submitted,

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